

STATE BANK OF INDIA					
PROPOSED ELECTRICAL & HVAC WORKS FOR STATE BANK OF INDIA – HOLEHONNURU BRANCH, RBO-5 SHIVAMOGGA, AO-6, MANGALURU					
BILL OF QUANTITIES -ELECTRICAL WORKS					
S. No.	Description	Qty	Unit	Rate in INR	Amount in INR (Excluding GST 18%)
	A - Internal wiring:				
1	Wiring for light, fan, 6/16 A socket outlet points etc., partly in surface conduit (in ceiling) and partly in recessed conduit system (in wall/partition/vertical drops etc., with 3 runs of 1.5 sq.mm (P + N + E) PVC insulated Flame Retardent Low Smoke copper wire in 20/25 mm dia. 16 G thick Medium Duty PVC FRLS conduit pipe (all as per IS 9537 part II) complete with all accessories like junction boxes, rubber bushes etc., including supplying and fixing 6A modular type switch with front plate for control housed in a zinc passivated MS box of approved make and giving connections.(The conduits, boxes to be concealed in wall/ceiling/ partition and concealing the same including making good the surfaces smooth to receive the putty and painting.) (Point wiring shall be Included circuit Main wires from the relevant LDB)(3 runs (P + N + E) of 2.5 sq.mm FRLS copper wire in 20/25 mm dia. 16 G thick Medium Duty PVC FRLS conduit pipe)				
	NOTE :- 1. Only FRLS class-2 conductor wire shall be used; 2. Conduit carrying circuit wiring should not carry point wiring and Conduit carrying point wiring should not carry submain/circuit wiring; 3. Flexible conduits & Elbows are not allowed; 4. The wires from ceiling junction to light points / light fixture shall be drawn in flexible Metal conduit with adptor & cover for junction box & crimp type lugs at both the ends alongwith necessary hardware & accessories, etc. as required; 5. Proper ferrules, lugs, must be used in all cabling and wiring on both load / source end; 6. Each switch board must be provided with respective ferrules representing the respective DB, Phase & Circuit numbers; 7. Looping of Neutral / Earth wire between two seperate Primary / Full Points is strictly not allowed; 8. Looping of Neutral / Earth wire between two seperate circuits on similar or other phase is strictly not allowed; 9. Ferulling / numbering / tagging to wires with circuit number & db name for all lighting & raw / ups power shall be strictly followed at both DB & switch board / switch socket boards ends.				
a	Light point - 1 light controlled by 1 no. 6 A switch	11.00	pt		0.00
b	Light point - 2 lighs controlled by 1 no. 6 A switch	18.00	pt		0.00
c	Light point - 3 lighs controlled by 1 no. 6 A switch	12.00	pt		0.00
d	Light point - 4 lighs controlled by 1 no. 6 A switch	6.00	pt		0.00
e	Wall Fan point (price should be inclusive 6A swirch, socket and circuit.	8.00	pt		0.00
f	Supplying and fixing 6 A socket outlet controlled by switch on the existing switch control box (board plug point)	5.00	pt		0.00
g	Call bell point including supplying of Buzzer and call register with reset button, bell push switch	1.00	pt		0.00
h	Ceiling Fan Point with Regulator	6.00	pt		0.00
i	Exhaust Fan Point	4.00	pt		0.00
	POWER WIRING / SUB MAINS :				

S. No.	Description	Qty	Unit	Rate in INR	Amount in INR (Excluding GST 18%)
2	Supply & Drawing power wiring circuit /sub mains using flexible, copper conductor, FRLS wires of 1100V grade, PVC insulated wires drawn in 2mm thick suitable size FR PVC conduit. The rate shall also include running of PVC insulated copper conductor as earth wire. All circuits starting from the respected db should have ferrulling arrangements.				
a	2 x 2.5 sqmm + 1 x 1.5 sqmm Copper wires in 20 mm dia PVC conduit.	400	Mtr		-
b	2 x 4.0 sqmm + 1 x 2.5 sqmm Copper wires in 20 mm dia PVC conduit.	350	Mtr		-
c	3 x 6.0 sqmm + 1 x 4.0 sqmm Copper wires in 32 mm dia PVC conduit	50	Mtr		-
d	4 x 6.0 sqmm + 2 x 4.0 sqmm Copper wires in 32 mm dia PVC conduit	40	Mtr		-
3	Disconnecting Arrangement				
3.a	Supply and installation of 20A heavy duty socket controlled by 20A DP MCB housed in zinc passivated metal box with 2 Mt of 3-core 2.5 Sqmm PVC flexible copper wire with proper flexible hose to be connected to lighting switch box of strong room, locker room and record rooms	3	Each		-
3.b	Supply and installation of 63 A 4P Isolator for master control switch for AC DB housed in zinc passivated metal box near the main door of branch consealed in wall / partition.	2	Each		-
3 c	Supply, installation, testing and commissioning following sizes isolator in metallic enclosure. The isolator shall be wall mounted using necessary brackets and fixing accessories.				
i)	20/25/32A, 4P isolator	2	Each		-
ii)	20/25/32A, DP Isolator	2	Each		-
iii)	10A DP Isolator with Weather proof box for AC outdoor units.	5	Each		-
4	POWER RECEPTACLES (DOMESTIC TYPE:)				
	Supply & fixing of 3/5 pin, commerical combination type socket outlet with indicator mounted on a outlet box with necessary interconnection. The box shall be flush mounted in brick/stone wall. The switches shall be of type Anchor roma make / equivalent. The rate shall also include cost of civil works involved in fixing of boxes, replastering of walls chased. All the switch / sockets shall have stickers for identification				
a	16A socket outlet controlled by 16A SP Switch	6			-
b	2 Nos. 6A socket outlet controlled by 2 Nos. 6A SP Switch	6			-
c	4 Nos. 16A socket outlet controlled by 1 Nos. 16A SP master Switch with indicator (item 4 e)	7			-
d	2 Nos. 16A socket outlet controlled by 2 Nos. 16A SP Switch with indicator	4			-
e	16A Master switch with indicator	7			-
f	5A, socket/top outlet near VRF / AC Indoor Units	5			-
g	15A, socket/Top outlet near Stabilizer of AC	5			-
	Total of Section - A				0.00
	B. PANELS/DBs/Cables				
	Lighting Distribution Board				
6	Supplying and fixing 3 phase with neutral MCB DB with metal double door, phase segregated complete with copper bus bars, copper interconnections etc., and fitted with the following: (All MCBs must be "D" curve)				
	Incomer:				
	1 no. 40 A 4P MCB				

S. No.	Description	Qty	Unit	Rate in INR	Amount in INR (Excluding GST 18%)
	Outgoings:				
	3 nos. 32 A DP 30 mA RCBOs				
	18 nos. 6/10 A single pole MCBs	1.00	each		0.00
	Power Distribution Board / AC DB				
7	Supplying and fixing of TPN DB - with provision of 4P MCB as incomer, RCBO as sub-incomer and SP MCBs as out going complete with double door, copper bus bars etc., and fitted with the following. DB recessed in wall/fixd on surface of wall with suitable powder coated angle iron frame work. Rate should include for providing necessary dummies as required (All MCBs must be "D" curve)				
	Incomer:				
	1 no. 40 A 4P MCB				
	Outgoings:				
	3 nos. 40 A DP 100 mA RCBOs				
	18 nos. 16/20 A single pole MCBs	1.00	each		0.00
8	Main Panel				
	Supply, erection, testing and commissioing of cubicle type switch board wall mounted, fabricted with 16 Swg CRCA sheets with the following				
	Bus bar chamber consisting of 25x6 mm electrolytic quality copper busbars supported on SMC for phases and 25x3mm for neutral. The busbars shall have colour coded PVC sleeving.The fault level shall be 25 Ka for 1 second.				
	Metering cubicle consisting of 1 no microprocessor controlled meter for reading all the electrical parameters like voltage, current, Kw, etc (Socomec EM-VIFP), LED type RYB indication lamps, 3 nos of resin cast CTs of ratio 200/5A class-1, 15 Va				
	Incomer: 1 nos. 100 A TPN 25 KA MCCB with FD Kit				
	Outgoings:				
	4 nos. 32 A TPN MCB 'C' Curve				
	4 nos. 63 A TPN MCB 'C' Curve				
	4nos 16A, SP MCB (C-series)				
	1 set R,Y,B phase indicating lamps (LED) with protection fuse				
	1 set 125 A capacity copper bus bars with 3 phase and neutral duly insulated with PVC colour sleeve (heat shrink) mounted on SMC/DMC base block				
	All the MCCBs should be provided with variable setting arrangement				
	Board powder coated with approved colour paint. Rate should include for providing necessary base channel for erection complete with foundation bolt, nuts etc., and all connected civil work for grouting the panel				
	Note: For all MCCBs ICU = ICS (100%) All the MCCBs should be provided with spreaders & rotary handle as required and should have provision for padlocking arrangement	1	each		-
9	Supply, erection, testing and commissioning of 100 amps 4 pole Manual change load break over switch enclosed in manufacturer's enclosure and making necessary connection for EB/DG.	1	No		-
10	Connecting cables				

S. No.	Description	Qty	Unit	Rate in INR	Amount in INR (Excluding GST 18%)
	Supplying and laying the following size XLPE cable 1.1 KV grade with aluminium/Copper conductor Cable along with 2 runs of 8 swg copper conductor laid on surface of wall/ceiling etc., with suitable MS powder coated bracket supports and clamping arrangement. Pipe sleeve should be provided for the cable routed through wall/partition.				
a	4x35 Sqmm Ar.AL Cable	40	mt		-
b	4X25 sq.mm Ar.AI Cable	30	mt		-
c	4x10 sqmm Ar.AI Cable For Disconnecting Arrangement of LDB/PDB.	50	mt		-
11	Providing end termination for the above cable using brass single compression gland and copper cable sockets. Rate should include for earthing the cable gland with copper earth clamp and copper earth wire				
a	4x35 Sqmm Ar.AL Cable	4	each		-
b	4X25 sq.mm Ar.AL Cable	6	each		-
c	4x10 sqmm Ar.AL Cable For For Disconnecting Arrangement of LDB/PDB	4	each		-
Total of Section - B					0.00
C - UPS System					
UPS O/P DBs					
11	Supply, installation, testing and commissioning of wall mounted cubicle type 4 way DP Distribution board (UPS DB) with double door concealed in wall and fabricated out of 16 Swg CRCA and powder coated to Siemens gray shade after undergoing 7- tank process. The rate shall include the cost of chasing the wall and concealing the same including making good the surfaces smooth to receive the putty and painting. All MCBs are should be "D" curve. The DB shall comprise of the following:-				
	Incomer:				
	1 no. 40A DP MCB				
	Outgoings				
	4 nos. 32A DP MCBs	1.00	each		0.00
UPS DBs Server & Banking hall					
12	Supply, installation, testing and commissioning of wall mounted cubicle type 12 way DP Distribution board with double door concealed in wall and fabricated out of 16 Swg CRCA and powder coated to Siemens gray shade after undergoing 7- tank process. The rate shall include the cost of chasing the wall and concealing the same including making good the surfaces smooth to receive the putty and painting. All MCBs are should be "D" curve. The DB shall comprise of the following:-				
	Incomer:				
	1 no. 32A DP MCB				
	Outgoings				
	12 nos. 6/10/16 A SP MCBs	1.00	each		0.00
UPS wiring:					
13	Supplying and laying 4 runs of 10 sq.mm + 2 runs fo 4 sq.mm FRLS copper wire in 40 mm dia Medium Duty PVC Conduit pipe complete with all accessories from Panel TO UPS	15.00	mt		0.00
Data Cabling					
14	Supply and laying of CAT 6 UTP cable through 25mm dia rigid PVC conduit with all accessories etc.(2 run for SBI Connect also)	600.00	mt		0.00
15	Supply and fixing of 2nos of CAT 6 Modular Information outlet with SM box on wall / partitions etc.	7.00	Nos.		0.00
16	Supply and fixing of 1nos of CAT 6 Modular Information outlet with SM box on wall / partitions etc.	3.00	Nos.		0.00

S. No.	Description	Qty	Unit	Rate in INR	Amount in INR (Excluding GST 18%)
19	Supply and installation of 9U wall mounted type rack. (HCL/Valrack make).	1.00	Nos.		0.00
20	Supply and Installation of CAT6 24 port patch panel in the floor/wall mounted type rack.	2.00	Nos.		0.00
21	Supply and installation of 1 m long patch chord.(CAT 6)	24.00	Nos.		0.00
22	Supply and installation of 2 m long patch chord. (CAT 6)	10.00	Nos.		0.00
23	Supply and installation of 3 m long patch chord. (CAT 6)	5.00	Nos.		0.00
24	Supply and installation of 5 m long patch chord. (CAT 6)	5.00	Nos.		0.00
25	Testing of NODES with reports (with PENTA scan reports).	14.00	Nos.		0.00
Total of Section - C					0.00
D - Telephone Conduit/socket outlets					
26	Supplying and laying 20 mm dia. 2 mm thick PVC conduit pipe	40.00	mt		0.00
27	Supplying and laying 2 pair 0.5 sq.mm telephone cable with tinned copper conductor in the above conduit. Rate should include for providing necessary identification with cable marking ferrules	80.00	mt		0.00
28	Supplying and laying 20 pair 0.5 sq.mm telephone cable with tinned copper conductor in the above conduit. Rate should include for providing necessary identification with cable marking ferrules	40.00	mt		0.00
29	Supplying and fixing 2 nos. RJ 11 Telephone socket with front plate housed in a electro plated sheet steel box of approved make - Manager Room	2.00	each		0.00
30	Same as above, but supplying and fixing 1 no. RJ 11 telephone socket for other areas	2.00	each		0.00
31	Supply and laying 20 pair krone connector housed in heavy duty ABS plastic mould with suitable locking arrangements.	1.00	No.		0.00
33	Supply, installation, testing and commissioning of Analog table mounted telephone instrument of make Beetel B-11 / equivalent	2.00	No.		0.00
Total of Section - D					0.00
E - Earthing					
34	Earthing with copper earth plate 600 mm x 600 mm x 3 mm thick including accessories 3 M below ground level, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. complete with charcoal / coke and salt including excavation and refilling complete as required.	1.00	each		0.00
35	Same as item no 12.1, but with 600x600x3mm G.I. plate electrode complete with 25mm dia GI watering pipe and other accessories mentioned above for UPS units)	1.00	each		0.00
36	Supply and installation of 10 Sqmm multi strand copper wire FRLS insulated to be drawn in 25mm dia PVC conduit 2mm thick and to be clamped partially on wall with GI clamps and partially buried in ground and terminations at both ends with copper crimping sockets. For UPS earthing	20.00	mt		0.00
37	25 x 3mm G.I. tape	20.00	mt		0.00
38	Supply and installation of 25x3mm copper strip to interconnect the earth electrodes with electrical panels	2.00	Nos		0.00
Total of Section - E					0.00
F - Lighting Fixtures					

S. No.	Description	Qty	Unit	Rate in INR	Amount in INR (Excluding GST 18%)
39	Supplying, fixing testing and commissioning of 18 W LED Surface Type down lighter complete with all accesories in the false ceiling including giving connections complete as required. Rate should include for all necessary supports for mounitng the light fittings, necessary 1 mtr. flexible hose from ceiling to light connection and suitably suspended with anchor fastener hook and auto clutch wire with end clamps.	10.00	each		0.00
40	Supplying, fixing testing and commissioning of 12 W LED Surface Type down lighter complete with all accesories in the false ceiling including giving connections complete as required. Rate should include for all necessary supports for mounitng the light fittings, necessary 1 mtr. flexible hose from ceiling to light connection and suitably suspended with anchor fastener hook and auto clutch wire with end clamps.	35.00	each		0.00
41	Same as above, but supply, erection, testing and commissioing of 40 W (2' x 2') LED light fittings SURFACE TYPE complete with all accessories suitably suspended with anchor fastener hook, necessary 1 mtr. flexible hose from ceiling to light connection and auto clutch wire with end clamps. The fitting should be independenty supported / suitably suspended with anchor fastener hook and auto clutch wire with end clamps from the ceiling and should not rest on the false ceiling. simmlar to	12.00	each		0.00
42	Supplying, installation, testing and commissioning of the following 4' TL5 Flourescent luminaries/ LED fittings complete with all accessories such as ballast, staeter etc. directly on wall / ceiling including connection with 1.5 sq mm P.V.C. insulated S.C.copper conductor as required - Similar to Aderno model of Philips make.	8.00	each		0.00
43	Proiding of Angle holder along with 10W LED Bulb for wasroom areas.	4.00	each		0.00
44	Supply of A.C. Exhaust fan in the existing hole on the wall of follwing sweeps and making necessary connections etc. as required complete and as directed by the Department.				0.00
45	300/305 mm sweep	2.00	each		0.00
46	Supply and installation of 1200mm High speed sweep anti-dust ceiling fan Similar to Aura prime/Avancer prime antidust 3 Blade of Crompton make	4.00	each		0.00
47	Supply and installation of High speed wall mount fan of approved make (METAL BODY)	6.00	each		0.00
48	1 no 0-24 hr electronic timer along with 1 no 12A 3-pole air break contactor enclosed in a powder coated MS box fabricated out of 16 Swg CRCA with a screwed front cover plate and mounted on wall. The same shall be completely wired (for UPS room)	2.00	Nos		0.00
49	Electrical safety - RUBBER mats of 1.1kV grade 1.8mx.0.9m	2.00	Nos		0.00
50	Supply and fixing : of 1nos First aid kit, Safety chart, Danger boards-2nos , No Admission boards-1nos	1.00	Nos		0.00
	Total of Section - F				0.00
G.	MISCELLANEOUS WORKS:				-
51.0	Supply and laying of 2mm thick FR PVC conduit with all necessary accessories like junction boxes, pull boxes. G.I fish wires and other fixing accessories as required. The rate shall also include chasing of walls, floor and plastering of the chased portion etc., all complete as required.				-
a)	20mm dia	20.00	Rmt		0.00

S. No.	Description	Qty	Unit	Rate in INR	Amount in INR (Excluding GST 18%)
b)	25 mm dia	20.00	Rmt		0.00
c)	32mm dia	20.00	Rmt		0.00
52	Supply and fixing of hot dipped galvanized GI ladder type cable tray, conforming to IEC- 61537. The cable tray shall be supplied in standard length of 3000mm. The rate shall include cost of necessary fixing accessories like bends, off sets, collar, Tee, fish plate etc., as required. Note : The cost of supports shall be inclusive				-
a)	200mm width x 50 mm height x 1.5 mm thick	8.00	mt		0.00
53.0	Supply and fixing of hot dipped galvanized GI thread rod. aloong with C channel. The rate shall include cost of necessary fixing accessories like bends, off sets, collar, Tee, fish plate etc., as required. Note : The cost of supports shall be inclusive	40.00	mt		0.00
	Total of Section - G				0.00
	Grand Total (A to G)				0.00